**What is claimed is**:

1. An antisense compound 8 to 30 nucleobases in length which modulates interleukin-5 signal transduction.

2. The antisense compound of claim 1 which is an antisense oligonucleotide.

3. The antisense compound of claim 1 which is targeted to a nucleic acid molecule encoding mammalian interleukin-5, wherein said antisense compound modulates the expression of mammalian interleukin-5.

4. An antisense compound up to 30 nucleobases in length comprising at least an 8-nucleobase portion of SEQ ID NO: 52, 53 or 62 which inhibits the expression of mammalian interleukin-5.

5. The antisense compound of claim 1 which is targeted to a nucleic acid molecule encoding a mammalian interleukin-5 receptor a, wherein said antisense compound modulates the expression of mammalian interleukin-5 receptor a.

6. An antisense compound up to 30 nucleobases in length comprising at least an 8-nucleobase portion of SEQ ID NO: 162, 166, 167, 169, 170, 171 or 172 which inhibits the expression of mammalian interleukin-5 receptor a.

7. The antisense compound of claim 2 wherein the antisense oligonucleotide comprises at least one modified internucleoside linkage.

8. The antisense compound of claim 7 wherein the modified internucleoside linkage of the antisense oligonucleotide is a phosphorothioate linkage.

9. The antisense compound of claim 7 wherein the modified internucleoside linkage of the antisense oligonucleotide is a peptide nucleic acid.

10. The antisense compound of claim 9 which comprises at least one basic amino acid conjugated to at least one end of the antisense compound.

11. The antisense compound of claim 10 wherein the basic amino acid is lysine or arginine.

12. The antisense compound of claim 10 which is less than 20 nucleobases in length.

13. The antisense compound of claim 12 comprising at least an 8-nucleobase portion of SEQ. ID NO: 209.

14. The antisense compound of claim 2 wherein the antisense oligonucleotide comprises at least one modified sugar moiety.

15. The antisense compound of claim 14 wherein the modified sugar moiety of the antisense oligonucleotide is a 2'-O-methoxyethyl sugar moiety.

16. The antisense compound of claim 15 wherein substantially all sugar moieties of the antisense oligonucleotide are 2'-O-methoxyethyl sugar moieties.

17. The antisense compound of claim 2 wherein the antisense oligonucleotide comprises at least one modified nucleobase.

18. The antisense compound of claim 17 wherein the modified nucleobase of the antisense oligonucleotide is a 5-methylcytosine.

19. The antisense compound of claim 15 wherein each 2'-O-methoxyethyl modified cytosine nucleobase of the antisense oligonucleotide is a 5-methylcytosine.

20. The antisense compound of claim 1 which is a chimeric oligonucleotide.

21. A pharmaceutical composition comprising the antisense compound of claim 1 and a pharmaceutically acceptable carrier or diluent.

22. The pharmaceutical composition of claim 21 further comprising a colloidal dispersion system.

23. The pharmaceutical composition of claim 21 wherein the antisense compound is an antisense oligonucleotide.

24. The antisense compound of claim 5 which is targeted to soluble interleukin-5 receptor a and which preferentially inhibits the expression of soluble interleukin-5 receptor a.

25. The antisense compound of claim 24 which is targeted to a region of a nucleic acid molecule encoding soluble interleukin-5 receptor a which is not found in a nucleic acid molecule encoding membrane interleukin-5 receptor a.

26. The antisense compound of claim 5 which is targeted to membrane interleukin-5 receptor a and which preferentially inhibits the expression of membrane interleukin-5 receptor a.

27. The antisense compound of claim 26 which is targeted to a region of a nucleic acid molecule encoding membrane interleukin-5 receptor a which is not found in a nucleic acid molecule encoding soluble interleukin-5 receptor a.

28. The antisense compound of claim 5 which inhibits the expression of both soluble and membrane forms of interleukin-5 receptor a.

29. The antisense compound of claim 5 which alters the ratio of interleukin-5 receptor a isoforms expressed by a cell or tissue.

30. The antisense compound of claim 29 which increases the ratio of the soluble form of interleukin-5 receptor a to the membrane form of interleukin-5 receptor a expressed.

31. The antisense compound of claim 30 which is an antisense oligonucleotide wherein substantially all sugar moieties of the antisense oligonucleotide are 2'-O-methoxyethyl sugar moieties.

32. The antisense compound of claim 5 which promotes apoptosis.

33. An antisense compound which alters splicing of an RNA encoding interleukin-5 receptor a, such that the ratio of interleukin-5 receptor a isoforms is altered.

34. The antisense compound of claim 33 wherein the antisense oligonucleotide comprises at least one modified internucleoside linkage.

35. The antisense compound of claim 34 wherein the modified internucleoside linkage of the antisense oligonucleotide is a phosphorothioate linkage.

36. The antisense compound of claim 34 wherein the modified internucleoside linkage is a peptide nucleic acid.

37. The antisense compound of claim 36 which comprises at least one basic amino acid conjugated to at least one end of the antisense compound.

38. The antisense compound of claim 37 wherein the basic amino acid is lysine or arginine.

39. The antisense compound of claim 38 which is less than 20 nucleobases in length.

40. The antisense compound of claim 36 comprising at least an 8-nucleobase portion of SEQ. ID NO: 209.

41. The antisense compound of claim 33 wherein the antisense oligonucleotide comprises at least one modified sugar moiety.

42. The antisense compound of claim 41 wherein the modified sugar moiety of the antisense oligonucleotide is a 2'-O-methoxyethyl sugar moiety.

43. The antisense compound of claim 42 wherein substantially all sugar moieties of the antisense oligonucleotide are 2'-O-methoxyethyl sugar moieties.

44. The antisense compound of claim 33 wherein the antisense oligonucleotide comprises at least one modified nucleobase.

45. The antisense compound of claim 44 wherein the modified nucleobase of the antisense oligonucleotide is a 5-methylcytosine.

46. The antisense compound of claim 42 wherein each 2'-O-methoxyethyl modified cytosine nucleobase of the antisense oligonucleotide is a 5-methylcytosine.

47. The antisense compound of claim 33 which comprises a conjugate group of at least one lysine or arginine linked to the antisense compound.

48. The antisense compound of claim 33 which is a chimeric oligonucleotide.

49. A method of modulating interleukin-5 signal transduction in cells or tissues comprising contacting said cells or tissues with the antisense compound of claim 1 so that interleukin-5 signal transduction is modulated.

50. A method of modulating the expression of mammalian interleukin-5 in mammalian cells or tissues comprising contacting said cells or tissues with the antisense compound of claim 3 so that expression of mammalian interleukin-5 is inhibited.

51. A method of modulating the expression of mammalian interleukin-5 receptor a in mammalian cells or tissues comprising contacting said cells or tissues with the antisense compound of claim 33 so that expression of mammalian interleukin-5 receptor a is inhibited.

52. A method of altering the ratio of the isoforms of mammalian interleukin-5 receptor a in mammalian cells or tissues comprising contacting said cells or tissues with the antisense compound of claim 33 so that the ratio of the mammalian interleukin-5 receptor a isoforms is altered.

53. A method of modulating the expression of mammalian interleukin-5 receptor a in mammalia cells or tissues comprising contacting said cells or tissues with the antisense compound of claim 5 so that expression of mammalian interleukin-5 receptor a is inhibited.

54. A method of altering the ratio of the isoforms of mammalian interleukin-5 receptor a in mammalian cells or tissues comprising contacting said cells or tissues with the antisense compound of claim 31 so that the ratio of the mammalian interleukin-5 receptor a isoforms is altered.

55. A method of treating a mammalian having a disease or condition associated with interleukin-5 signal transduction comprising administering to said mammal a therapeutically or prophylactically effective amount of the antisense compound of claim 1 so that interleukin-5 signal transduction is modulated.

56. A method of treating a mammal having a disease or condition associated with interleukin-5 expression comprising administering to said mammal a therapeutically or prophylactically effective amount of the antisense compound of claim 3 so that interleukin-5 expression is modulated.

57. A method of treating a mammal having a disease or condition associated with interleukin-5 receptor a expression comprising administering to said mammal a therapeutically or prophylactically effective amount of the antisense compound

of claim 5 so that interleukin-5 receptor a expression is modulated.

58. The method of claim 57 wherein the disease or condition is an eosinophilic syndrome or asthma.

59. The method of claim 57 wherein the route of administration is pulmonary administration.

60. A method of treating a mammal having a disease or condition associated with interleukin-5 receptor a expression comprising administering to said mammal a therapeutically or prophylactically effective amount of the antisense compound of claim 33 so that the ratio of interleukin-5 receptor a isoforms is altered.

61. The method of claim 60 wherein the disease or condition is an eosinophilic syndrome or asthma.

62. The method of claim 60 wherein the route of administration is pulmonary administration.

63. A method of treating a mammal having a disease or condition characterized by a reduction in apoptosis comprising administering to said mammal a prophylactically or therapeutically effective amount of the antisense compound of claim 32.

64. A method of treating a mammal having a disease or condition associated with interleukin-5 receptor a expression comprising administering to said mammal a therapeutically or prophylactically effective amount of the antisense compound of claim 26 so that expression of membrane interleukin-5 receptor a is modulated.

65. The method of claim 64 wherein the disease or condition is asthma or an eosinophilic syndrome.

66. The method of claim 64 wherein the route of administration is pulmonary administration.

67. The pharmaceutical composition of claim 21 further comprising a chemotherapeutic agent for the treatment of asthma.

68. A pharmaceutical composition comprising the antisense compound of claim 28 and a pharmaceutically acceptable carrier or diluent.

69. A pharmaceutical composition comprising the antisense compound of claim 36 and a pharmaceutically acceptable carrier or diluent.

70. A diagnostic kit for detecting the expression level of the membrane versus soluble form of IL-5 Receptor a.

71. The diagnostic kit of claim 70 comprising the antisense compound of claim 33.

72. The diagnostic kit of claim 71 wherein the antisense compound is a peptide nucleic acid.